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Knowledge, Attitude and Practice on Prevention and Control of Tuberculosis among Bilida Kebele Residents, Mana Woreda, Jimma Zone, Oromia Region, South West Ethiopia

Abebe Merchew Faris, Gugsu Nemera Germossa and Desalew Tilahun Beyene*

Department of Nursing, Jimma University, Ethiopia

*Corresponding author: Desalew Tilahun Beyene, Department of Nursing, Jimma University, Ethiopia, Tel: +251471110331; E-mail: desalewtilahun34@gmail.com

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Abstract

This study revealed that awareness (KAP) of community on TB about prevention and control of tuberculosis. With regard to knowledge on TB (96.1%) of respondents reported that they heard about the disease called tuberculosis and their most source of information was radio which accounted (39.3%). Majority of (44.8%) knew that tuberculosis spread by droplets if there is contact with known TB patients cough and sneeze.

Keywords: Tuberculosis; Prevention; Infectious disease

Introduction

TB is an infectious disease caused by the bacillus *Mycobacterium tuberculosis*. It is transmitted from one person to another person through droplet nuclei of infectious person during coughing, sneezing and talking. TB is treated by long term anti-tuberculosis agent [1,2]. The goals of TB control are to reduce mortality, morbidity and disease transmission (while preventing drug resistance) until TB no longer poses a threat to public health. In order to achieve this, it is necessary to ensure that the public had adequate awareness, practice and attitude toward TB treatment, prevention and control [2]. Although TB has only 11% of the world population, Africa accounts today for more than quarter of the global burden with an estimated 2.4 million TB cases and 540,000 TB deaths annually [3]. Ethiopia ranks seventh among the world's 22 high burden tuberculosis countries. According to WHO global TB report 2013, the country has an estimated incidence rate of 224 cases per 100,000 populations [1]. Studies showed that a low knowledge score was more likely to be observed among the illiterate, females, rural residences, low income, and youngest age group [4]. Tuberculosis is the common cause of mortality and morbidity in Ethiopia [5]. Ethiopia as multi-cultural country, the knowledge of TB has been mentioned to

demonstrate considerable spatial changes [6]. Moreover, through the electronic media and health education campaigns, information about healthcare can attain many public rapidly and boost the knowledge level among individuals [7]. Different studies demonstrated that limited knowledge was found to be observed among the uneducated, women, countryside residences, poor, and youngsters'. Additionally, lower than half of the study subjects were conscious about the TB treatment and diagnosis, which could act as factor to diagnosing tuberculosis and considerably have an effect on the case notification rate [8,9]. Factors contributed to the disease acquiring, epidemiological burden, and disease development includes low income, HIV, inadequate nutrition, cigarette smoking, low access health services infrastructure, lack of consciousness and information about the cause, transmission mode and sign-symptoms of the disease, demographic features, poor health education and tradition or culture related beliefs. The above mentioned factors considered to have crucial impact on the patients' health seeking behaviors which delay in diagnosis, treatment [10-12].

In addition, the social relationships and ethical identity of people afflicted by TB disease affected if they have negative concept of the disease and also it has impact on TB control efforts in general [13]. Because of these, enhancing communities' awareness about tuberculosis and involving the people in the disease control considered to be WHO basic component of the "stop TB strategy" [14]. Of over 94 million population of Ethiopia, rural area residents are accounted 85% that are far away from health facilities, media, consequently knowledge, attitude and practice assessment among people toward the disease were incredibly essential to collect data for identification of the problem, program planning and intervention.

It is important that basic knowledge about the disease and the availability of treatment is clear among community to prevent any undue delay in availing the service. The perceptions of TB prevailing in the community influence the health seeking behavior of people for their symptoms. While care seeking behavior of chest symptomatic has been explored

in different studies, there is dearth of information on community perceptions of TB [15-17]. The study in Mongolia in 2012 on KAP on TB more than half of the population had unsatisfactory level of knowledge towards TB (53.9%). A relationship between knowledge on TB and educational background, age and gender was observed. The percentage of the people who are knowledgeable about TB was less among population aged 18-29. The most effective means of media to distribute TB messages is TV (61%) and 32.4% of the respondents pointed out IEC materials while 26.2% preferred health professionals. Most of public have positive attitude to go to health care facility immediately if TB signs occur. The reasons of not approaching health care facility were identified by the respondents as majority of public do not know which health care facility to go; hospitals are usually located far and public transportation is not well organized; health care cost is expensive; and do not have time to go hospital [18,19]. In south west Ethiopia cross sectional study on community KAP on 422 study participants (58.5% males and 41.5% females) only 3.3% mentioned bacteria/germ as a cause of pulmonary TB (PTB) and 9.9% mentioned cough for at least two weeks as the sign of TB, 57.6% of the study participants had good level of knowledge about TB, 40.8% had favorable attitude towards TB and 45.9% had good practices. Female participants were less likely to have good level of knowledge less likely to have favorable attitude and less likely to have good practices compared to male participants [9]. According to the study conducted in Shinile town, Somali regional state overall knowledge mean score about TB was 10.67. One hundred and eighty-seven participants (45.6%) had low overall TB knowledge and 223 (54.4%) had high over- all knowledge about TB. High level of overall knowledge about TB was reported among individuals with educational status of grade 8 up to grade 12 compared to illiterate individuals. Mean knowledge score about attitude towards TB was 3.76. One hundred and seventy-six (42.9%) had poor attitude and two hundred and thirty-one (57.1%) had good attitude towards TB and those affected by the disease [20,21]. Despite there is free service of treatment and follow-up for TB in our country the burden of disease not much decrease because of lack of awareness about the disease. Therefore, the aim is to assess individuals' knowledge, attitude and practice on prevention and control of tuberculosis.

Materials and Methods

The study was conducted in Bilida Kebele from May, 4-6/2017, Mana Woreda, Jimma Zone, Oromia Region, and south west of Ethiopia. It is one among the kebeles under Mana woreda with the total number of population 8250 and total house hold of 850. It is 364 far from Addis Ababa and 19 km far from Jimma University.

Study design: Community based cross-sectional study was employed with the total sample size 359 which was obtained by using single population proportion formula among Bilida kebele residents those who are above 18 years old.

Data collection methods

Data was collected using face to face interview based on inclusion criteria whose age is 18 years and older individuals who are living in Bilida Kebele during study period. After developing questionnaire, through reviewing relevant literatures, previous similar studies and guidelines [20]. Before commencing data collection, ethical clearance and approval was obtained from Jimma University, College Health Science and Medicine, department of Nursing. Oral informed consent was secured from the involved participants for their participation after the nature of the study was fully explained to them. The right to refuse was respected and data was collected respectfully.

Results

Scio demographic characteristics

A total of 359 sampled individuals were interviewed gave a response rate of 100% and different questions were asked to assess their KAP on prevention and control of TB. Out of total participants almost half of respondents were females (53.8%) and majority of the residents were in the age range of 30-44 (44.6%) as shown in the **Table 1** below.

Attitude about TB: Among all respondents 92.2% agreed that TB is deadly infectious disease and 1.9% were not sure. About 52.6% of the respondents agreed that TB can spread to other part of the body. Majority of the study respondents 80.5% agreed that irregular taking of TB drugs during course would lead to drug resistance and 84.4% of the study respondents agreed that delayed TB treatment may lead to spread of the disease. About 82.2% of the respondents agreed that starting the TB treatment soon decreases the expense.

Practice on TB: Among 359 respondents 82.5% had no previous history of exposure to TB patients and about 7.5% respondents had history of exposure to TB patient. About 1.9% of the study participant covered their nose and mouth with tissue paper when coughing and sneezing. Out of 359 the study participants (26.2%) said that they disposed the tissue afterwards and 1.9% of them used mask when necessary. About 17% of the study participants avoided using hands when coughing and sneezing and 86.4% of them turned away from other person when they were coughing and sneezing (**Figure 1**).

Table 1 Knowledge of the Respondent about TB in Bilida Kebele, Jimma zone, south west Ethiopia, April 4-6, 2017.

Variables	Frequency	Percent
Source of information		
Health professionals	99	27.6
Friends	21	5.8
previous TB patients	14	3.9
Television	49	13.6

Radio	141	39.3
family members	21	5.8
Other	14	3.9
Is TB spread by droplets through cough and sneeze when contacting with known TB patient?		
I don't now	79	22
not sure	119	33.1
yes, I know	161	44.8
Is TB curable		
I don't now	56	15.6
not sure	29	8.1
yes, I know	274	76.3
Is inadequate diet factor favoring TB disease?		
I don't now	56	15.6
not sure	92	25.6
yes, I know	211	58.8
Is BCG vaccine prevention measure of TB disease?		
I don't now	42	11.7
not sure	2	0.6
yes, I know	315	87.7

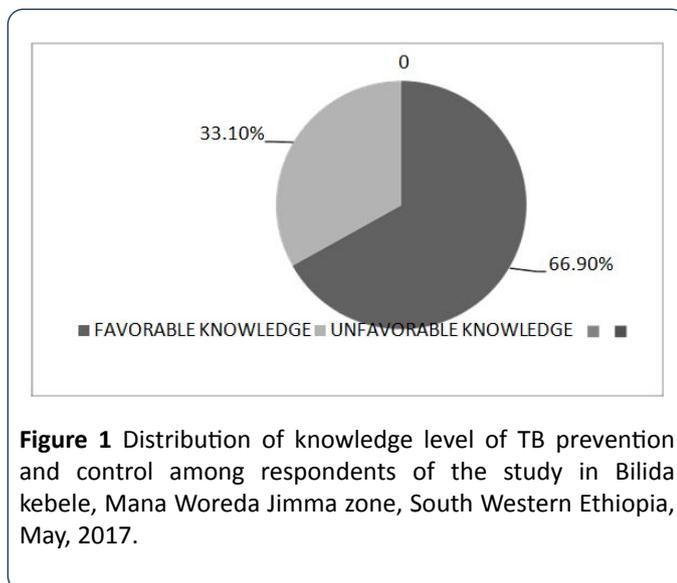


Figure 1 Distribution of knowledge level of TB prevention and control among respondents of the study in Bilida kebele, Mana Woreda Jimma zone, South Western Ethiopia, May, 2017.

Discussion and Conclusion

This study revealed that awareness (KAP) of community on TB about prevention and control of tuberculosis. With regard to knowledge on TB (96.1%) of respondents reported that they heard about the disease called tuberculosis and their most source of information was radio which accounted (39.3%). Majority of (44.8%) knew that tuberculosis spread by droplets if there is contact with known TB patients cough and sneeze. This means that study participants had more information about the disease than the study conducted in Southwest

Ethiopia. In (83%) of heard TB and their most source of information was radio 141 (39.3%), health professionals 99 (27.6%) and television. The discrepancy might be due to the role of propagating health information using mass media might be significant, which amplifies promotion of health education conducted in different settings is important. Meanwhile, the finding also evidenced that individualized or group health education at health facilities as well as community level should be strengthened in such a way that could address those community members who visit the facilities for different services [21]. In this study, about (37.6%) respondents responded that TB is caused by bacteria/germ. When compared to the study conducted in 2013 on KAP of TB patients in Addis Ababa, Lideta sub city about (84.51%) study participants mentioned that TB is caused by bacteria is low. This discrepancy might be due to study area and time difference: knowledge level could vary over time owing to the routine health education activities and improved public media access that is it was conducted rural area (Bilida Kebele). Knowledge about route of transmission of the disease is another factor in TB prevention and control program. In this study, about (44.8%) of respondents had knowledge about the routes of transmission through the air when a person with TB sneezes or coughs which is lower than in the study conducted in South west Ethiopia indicated that about (83.8%) of individuals had knowledge about the route of transmission [22]. Whereas the study conducted in Nigeria indicated that (77.2%) of patients have knowledge about the transmission TB through air during coughing [23-25]. This shows that the association of transmission through air with TB is considerable that might affect the level of ventilation required to prevent TB transmission. The result of this study had shown that favorable knowledge (66.9%) of residents about tuberculosis disease was satisfactory knowledge on TB and it is better than the study conducted in Mongolia in which more than half of the population had unsatisfactory level of knowledge towards TB (53.9%) [19] and higher than the study conducted in Somalia regional state in Ethiopia (54.3%) [21]. One explanation of this variation could be the spatial difference and associated socio-cultural differences, between the two studies might partly explain the discrepancy and also it might be due to the role of media and the difference in study period. In this study respondents, on agreement or disagreement about TB is deadly infectious disease majority of the respondents agreed (92.2%) that TB is deadly infectious disease and it was found higher when compared to the study done in lideta sub city where only (30.28%) of patients agreed that TB is deadly infectious diseases. One explanation of this variation could be they are hospitalized and getting treatment which is ideal settings for health interventions; in hospitalized and treatment getting clients, it is easy to provide health education since a lot of people can be reached at one time compared to the scattered remote areas of the general population [20]. With regard to attitude, about (45.7%) of individuals had favorable attitude about prevention and control of tuberculosis which is greater than the study done Southwest Ethiopia (40.8%) had favorable attitude towards TB [22-24]. The discrepancy might be due to they believe TB is a very serious disease and they mentioned that they fear even to contact TB patients and

would stay away from them or would not show any feeling instead of showing compassion and a desire to help. Negative attitude of individuals towards health care seeking was identified as an important attribute for delay for diagnosis and treatment. Therefore, the finding of this study is also suggestive that further interventions are mandatory in order to change attitudes of tuberculosis patient i.e., for the national TB program to be successful, the concerned bodies such as the federal ministry of health, regional health bureaus, and non-governmental organizations (NGOs) should give priority attention to the Bilida Kebele residents and use this scientific evidence to help design and provide appropriate health education in the settings. The health extension personnel should be given a sensitization training tailored at the identified gaps and continuous support is needed to ensure the quality and the sustainability of the health education. Regarding practice only (1.9%) study participants covered their mouth and nose with tissue paper when coughing which is lower compared to the study conducted in Lideta sub city (80.3%) this might be due to getting of health education at hospital and being resident of the town [20]. About (17%) of the study participants avoid using hands when coughing and sneezing and (86.4%) of them turned away from other person when they were coughing and sneezing which is greater than study conducted in Nigeria, avoidance of coughing or sneezing on persons (56.3%) [25]. This difference might be due to difference in socio demographic characteristics, study area, time of study and number of study variables.

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